

Description

[NECK BAND FOR COOLING OR HEATING]

BACKGROUND OF INVENTION

[0001] Field of the Invention

[0002] This invention relates to devices for cooling human beings and animals or for heating human beings or animals that can be worn by the user for cooling or heating for limited periods of time especially adapted for use around the person's neck during activities.

[0003] Description of Related Art

[0004] Exercise by human beings or animals whether it being the form of athletics, recreation or training strictly for health benefits is quite commonplace. Typically, exercise has become a year round event regardless of weather (summertime or wintertime). It is not uncommon to see several people jogging regardless of the outdoor temperature (hot or cold). Many sports such as football require

people to play games in all sorts of inclement weather. Even sports such as tennis are played outdoors in the summer in very hot climates of the world. It has become quite common to see people carrying water jugs or water containers while they are jogging or participating in sports. However, drinking a lot of fluids even though it is very essential for your health does not always provide the necessary cooling that would be healthy for human beings who are working out and participating in a lot of physical exercise especially when it is warm out or extremely cold out.

[0005] One of the purposes of the present invention is to provide a very lightweight, comfortable, portable neck ring that contains a gel-like substance that can be heated or cooled prior to the workout and then be worn by the wearer during the workout to provide body cooling or, in the case of cold climates, perhaps, body heating. U.S. Patent No. 5,802,865 issued to Strauss, September 8, 1998, shows an evaporative personal cooler. This device includes sponge-like material that allows for evaporation and a fan that is carried. The device is quite bulky and looks very uncomfortable. The present invention overcomes the bulky nature of such devices by eliminating a fan and

other complexities by providing a simple neck ring that can cool or heat a human being around the neck.

SUMMARY OF INVENTION

[0006] An adjustable neck ring comprising an outer fabric or fabric-like tube or sleeve sized in length to fit around the neck of a human being or other type of animal that includes an elliptically shaped chamber (elliptically shaped in cross section perpendicular to the longitudinal axis) that is formed of fabric walls sized in length to fit around the neck of a human being or other animal. At each of the ends of the elongated fabric neck ring is a pair of hook and pile fasteners that can be adjusted in length to accommodate different sizes of humans or animals.

[0007] An elongated elliptical gel pack that includes a plastic clear material containing a non-toxic biodegradable gel that is soft to the touch forms an elongated tube of material that can be placed in a refrigerator for a few hours (especially in a freezer of a refrigerator) so that the gel becomes extremely cold. The material, however, is still pliable. The elongated elliptical tube that contains a gel that is sold under the trademark Magic IceTM is then inserted into the fabric elliptical chamber of the neck ring. The neck ring includes two layers of fabric on one side

and a single layer of fabric on the opposite side which when joined together along two threaded seams forms the elliptical chamber. The two layers of fabric are used against the skin of the human being to keep the skin from becoming too cold in specific areas adjacent the skin by extracting heat from the neck area of the human during its use. Even when the Magic IceTM pack is subjected to below freezing temperatures, it is still pliable enough and does not freeze into a rigid solid state that the gel pack can be easily inserted into the neck ring passageway and the entire neck ring adjusted around the neck of the human being in a curved shape.

[0008] The advantage of the present invention is that it provides extreme cooling directly to an area of the human being that can utilize the cooling through contact with the blood flow of the person and the skin of the person while at the same time being extremely lightweight, adjustable and portable. Someone can participate in virtually any sport wearing the neck ring because of its lightweight.

[0009] The same device is capable of being used in cold weather or below freezing weather by heating the gel pack in hot water or in a microwave oven and then placing the gel pack device into the neck ring.

- [0010] In order to use the device for cooling, the user would take the gel pack, put it into the refrigerator freezer and let the gel pack sit there for a couple of hours. When the person is ready to start the exercise, he would take the gel pack out of the freezer, insert the gel pack directly into the fabric elliptical passage that is sized to fit the gel pack in length, width and circumference and then attach the neck ring around the user's neck using the adjustable fasteners. The same procedure is followed for heating except for the gel pack is heated instead of chilled.
- [0011] The gel pack material that can be used in this invention is described in U.S. Patent No. 6,379,582 entitled "Crosslinked Co-Polymer Composition for Thermal Energy Storage" issued to Putnam April 30, 2002 and is incorporated by reference herein.
- [0012] It is an object of this invention to provide an improved, lightweight, portable device that is worn around the neck of a person for heating or cooling of the human being or animal during exercise.
- [0013] It is another object of this invention to provide a lightweight device that can provide cooling or heating to a human being or an animal that is convenient to wear.
- [0014] In accordance with these and other objects which will be-

come apparent hereinafter, the instant invention will now be described with particular reference to the accompanying drawings.

BRIEF DESCRIPTION OF DRAWINGS

[0015] Figure 1 shows a perspective view of the improved neck ring without the gel pack.

[0016] Figure 2 shows a perspective view of a gel pack used in the present invention.

[0017] Figure 3 shows a cross sectional view of the invention.

DETAILED DESCRIPTION

[0018] Referring now to the drawings and, in particular, Figure 1, the present invention is shown at 10 that is comprised of an outer neck ring 12 that has a pair of adjustable hook and pile straps 28 and 30 attached at each end. The fabric neck ring 12 which is preferably made of an artificial fabric such as polyester or natural fabric actually includes a first fabric layer 14 and a second fabric layer 16 which are essentially rectangular panels that are sewn together by threads 18 all the way around joining the two panels firmly together to make a two ply or two fabric thick layer on one side of neck ring 12. A third fabric layer 20 is attached to fabric layer 16 by threads 22 to form an open

chamber 20a that is substantially elliptical in cross section that is perpendicular to the longitudinal axis of the neck ring. The length of the neck ring 12 is adjustable and sized to fit around the neck of a human being or an animal especially when used with the hook and pile fastener adjustable straps 28 and 30 which are joined together along predetermined points on each fastener to hold the neck ring in place. The strap fastener 28 may include hooks while fastener 30 may include a pile that do join together. The fastener product is commonly sold under the trademark Velcro. The adjustable fasteners 28 and 30 may be sewn in between the two ply panels 14 and 16 at the factory at each end of the neck ring.

[0019] Referring now to Figure 2, the gel pack 24 is shown as a plastic tube 24a that is elliptically shaped that has a gel-like substance on the inside 26 that can be subjected to extremely cold temperatures below freezing or extremely hot temperatures and the material retains the cold or the heat for several minutes or hours. The gel pack 24 is sized in length, width and diameter to fit snugly within chamber 20a of the neck ring 12 shown in Figure 1.

[0020] Figure 3 shows a cross section of the invention that includes the two fabric panels 14 and 16 sewn together by

thread 18 that may include the fastener 30 sewn in between the two at one end. The panel 20 which is fabric also is sewn onto the two ply panels 14 and 16 by thread 22 but leaving sufficient room to form passage 20a (Figure 1). The gel pack 24 is inserted into the fabric liner of the neck ring and includes the gel material 26. Note that the neck ring is flat along panel 14 and includes a two ply separation from the cold or hot material that would be the gel 26. This is for the comfort of the wearer.

[0021] To operate the invention, the user would take the gel pack 24, put it in the freezer for a couple of hours or put it in hot water for substantial time. When ready for use, the user would then insert the gel pack 24 into the neck ring 12 in chamber 20a and then place the neck ring around the user's neck by adjusting the fasteners 28 and 30 to the particular size neck of the user. The user then can get cooling for several minutes while wearing the neck ring with hardly even noticing wearing the neck ring.

[0022] The instant invention has been shown and described herein in what is considered to be the most practical and preferred embodiment. It is recognized, however, that departures may be made therefrom within the scope of the invention and that obvious modifications will occur to a

person skilled in the art.